

CLAIMS

What is claimed is:

1. A well completion float shoe/collar tool comprising:

an outer tubular member and an inner tubular member, said outer tubular member having both upwardly facing and downwardly facing fluid jet openings, said upwardly facing fluid jet openings being initially closed by said inner member during casing string run in;

said inner tubular member having a bore there through initially open to fluid flow and permitting fluid flow to said downwardly facing fluid jet openings; and means for causing longitudinal movement of said inner member with respect to said outer member, said movement causing said downwardly facing jets to close and said upwardly facing jets to open.

2. A well completion float shoe/collar tool comprising:

an inner tubular member and an outer tubular member, said outer tubular member having both upwardly and downwardly facing fluid jet openings therein; and means for selectively closing one or the other of said fluid jet openings.

3. The apparatus of claim 2 wherein said means for selectively closing comprises means for causing relative motion of said inner member with respect to said outer member.

4. The apparatus of claim 3 wherein said relative motion comprises longitudinal relative motion.

"WELL COMPLETION CONVERTIBLE FLOAT/SHOE COLLAR"

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Sub 2
5. The apparatus of claim 4 wherein said longitudinal relative motion is caused by means of
3 obturating an internal passage of said inner member.
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5 6. The apparatus of claim 5 wherein said obturating means includes a ball pumped down under
6 fluid pressure from the surface of the earth to said tool.
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8 7. The apparatus of claim 1 and further including:
9 valve means, activated upon said movement, to prevent fluid from re-entering
10 said outer and inner tubular members between pumping pressure strokes.
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12 8. The apparatus of claim 7 wherein said valve means comprises one or more one way flow
13 check valves.
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15 9. The apparatus of claim 8 wherein said check valves comprise flapper type valves.
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17 10. The apparatus of claim 9 wherein said flapper valves are held in their open position during
18 casing run in.
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